WHAT IS CLAIMED IS:

1. A dynamic damper comprising:

a cylindrical metallic mass member including a plurality of engaging recesses formed at least at axially opposite end portions thereof so as to be open in an outer circumferential surface thereof;

a cylindrical fixing member of elastic body having an inner diameter smaller than an inner diameter of said metallic mass member;

a connecting member of elastic body being adapted to connect said metallic mass member with respect to said fixing member;

a covering member of elastic body being integrally formed with said cylindrical fixing member and said connecting member, and covering said metallic mass member; and

a plurality of engaging projections projected into and filling approximately completely said plurality of recesses of the metallic mass member, respectively, said engaging projections being integrally formed with said covering member,

wherein said connecting member and said covering member being fixed to said metallic mass member without using adhesive, and

wherein said dynamic damper is adapted to be disposed about and fixedly mounted on a rotative member as a damping object such that said metallic mass member surrounds the rotative member with a given gap therebetween, and is elastically connected to the rotative member via said connecting member.

2. A dynamic damper according to claim 1, wherein each of said engaging recesses is of groove shape and extends in an axial direction of said metallic mass member with a substantially constant cross sectional shape.

3. A dynamic damper according to claim 1, wherein said fixing member is coaxially disposed within a bore of said metallic mass member such that said fixing member and said metallic mass member are radially opposed to each other with a given gap therebetween, and said connecting member is disposed between said fixing member and said metallic mass member so as to radially extend over said given gap for elastically connecting said fixing member and said metallic mass member.

4. A dynamic damper according to claim 1, wherein said fixing member comprises a pair of fixing portions disposed on and spaced away from axially opposite sides of said metallic mass member, respectively, each being in a coaxial relationship with said metallic member, and said connecting member comprises a pair of connecting portions disposed between said axially opposite end portions of said metallic mass member and axially inner end portions of said fixing portions, respectively, and connect said axially opposite end portions and said axially inner end portions together over their entire circumferences, said dynamic damper being adapted to be disposed about and fixedly mounted on the rotative member such that said metallic mass member surrounds the rotative member with a given gap therebetween over an entire circumference thereof, and said pair of fixing portions are press fitted onto the rotative member.

5. A dynamic damper according to claim 1, wherein said engaging recesses are formed at said axially opposite end portions of said metallic mass member, but not formed at axially intermediate portions of said metallic mass member.

6. A dynamic damper according to claim 5, wherein a number and circumferential positions of said plurality of said recesses are

made identical in both of said axially opposite end portions of said metallic mass member so that said recesses formed at one of said axially opposite end portions of said metallic mass member are opposed to said recesses formed at an other one of said axially opposite end portions, respectively.

7. A dynamic damper according to claim 5, wherein each of said plurality of recesses measures 2mm long or more and 1mm thick or more.

8. A dynamic damper according to claim 1, wherein each of said plurality of recess is open in a corresponding one of axially opposite end faces of said metallic mass member, and has a sloped floor whose diameter is gradually decreases in an axially outward direction.